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DEPARTMENT OF CHEMISTRY

February 15, 1954

Professor Joshua Lederberg
Department of Genetics
University of Wisconsin
(College of Agriculture)
Madison 6, Wisconsin

Dear Doctor Lederberg,

Thank you for your letter of February 10, 1954. I am an admirer of your fundamental work on bacterial genetics and am happy to learn that interactions with the acridines may assist you in your work.

Enclosed is a reprint of my work on the interactions of acridines with nucleic acids. (RNA and DNA). As you see p. 666, serum albumin competes with the dye for the substrate (nucleic acid).

C. Hinshelwood and his school have been working on the bacteriacidal effects of proflavine (one of the constituents of commercial acriflavine). His work has appeared in the British journal - the Journal of the Chemical Society and elsewhere (Chem. Abstracts will aid you in a literature search). A. A. Albert has written a book entitled "The Acridines" which appeared about 1950.

the only work on

As far as I have been able to find out, my work (in the enclosed reprint) is the study on binding. Incidentally, last year I found that protamines (e.g. from herring sperm) and streptomycin (see the other enclosed reprint) compete with acriflavine for binding to nucleic acids but I haven't written this up. In an earlier paper (Oster and Grimsson, Arch. Biochem. 24 119 (1949) - I no longer have reprints) we found that acriflavine binds strongly to heat denatured proteins. Remember that acriflavine is very photodynamuc (Oster and McLaren, J. Gen. Physiol. 33 315 (1950) - reprints no longer available) so that you should take care to avoid strong light.

If you are ever in the East I would be happy to meet you to discuss problems of mutual interest.

Sincerely yours,

Gerald Oster

Gerald Oster
Associate Professor of
Polymer Chemistry

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Encls.